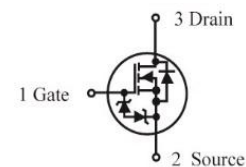
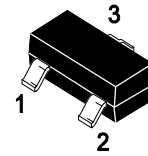


## N-Channel Enhancement Mode MOSFET

### Feature

- 50V/0.2A,  $R_{DS(ON)}=3.5\ \Omega$  (MAX) @  $V_{GS}=5V, I_D=0.2A$ .  
 $R_{DS(ON)}=10\ \Omega$  (MAX) @  $V_{GS}=2.75V, I_D=0.2A$ .
- Super High dense cell design for extremely low  $R_{DS(ON)}$ .
- Reliable and Rugged.
- Low Threshold Voltage (0.5V—1.5 V) Make it Ideal for Low Voltage Applications.
- ESD protected.
- SOT-23 for Surface Mount Package.



SOT-23

### Applications

Power Management in DC/DC Converters、 Portable and Battery-powered Products.

### Absolute Maximum Ratings TA=25°C Unless Otherwise noted

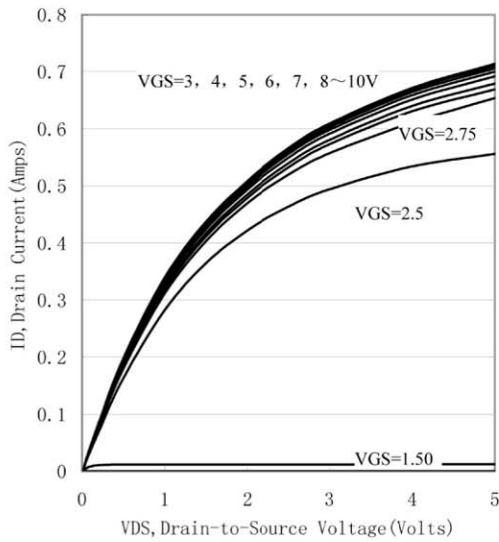
Parameter	Symbol	Limit	Units
Drain-Source Voltage	VDS	50	V
Gate-Source Voltage	VGS	±20	V
Drain Current-Continuous	ID	0.2	A

### Electrical Characteristics

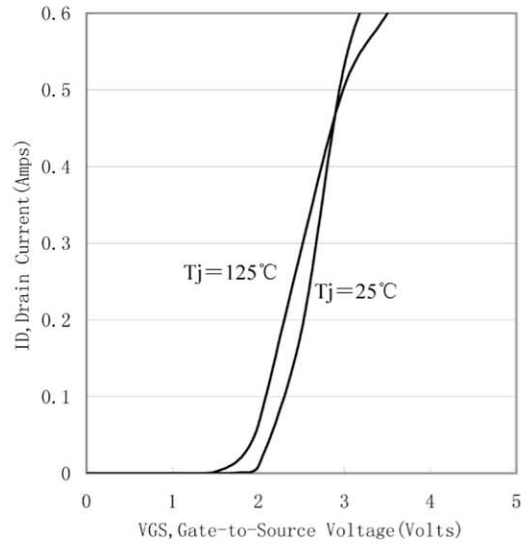
TA=25°C Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
<b>Off Characteristics</b>						
Drain-source Voltage	BVDSS	$V_{GS}=0V, I_D=250\ \mu A$	50	-	-	V
Zero-Gate Voltage Drain Current	IDSS	$V_{DS}=50V, V_{GS}=0V$	-	-	0.5	$\mu A$
		$V_{DS}=25V, V_{GS}=0V$	-	-	0.1	
Gate Body Leakage Current, Forward	IGSSF	$V_{GS}=20V, V_{DS}=0V$	-	-	300	nA
Gate Body Leakage Current, Reverse	IGSSR	$V_{GS}=-20V, V_{DS}=0V$	-	-	-300	nA
<b>On Characteristics</b>						
Gate Threshold Voltage	VGS(TH)	$V_{GS}=V_{DS}, I_D=1.0\ mA$	0.5	-	1.5	V
Static Drain-Source On-Resistance	RDS(ON)	$V_{GS}=5.0V, I_D=0.2A$	-	-	3.5	$\Omega$
		$V_{GS}=2.75V, I_D=0.2A$	-	-	10	$\Omega$
<b>Drain-Source Diode Characteristics and Maximum Ratings</b>						
Diode Forward Voltage	VSD	$V_{GS}=2.75V, I_D=0.2A$			2.5	V

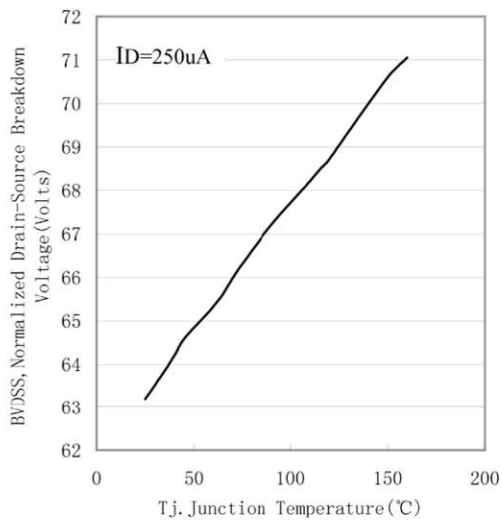
## Typical Characteristics



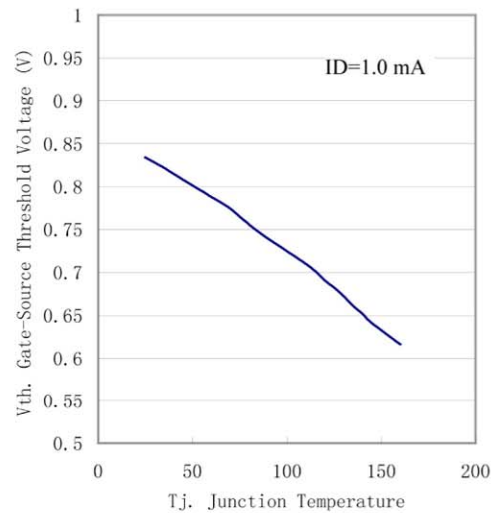
**Figure 1. Output Characteristics**



**Figure 2. Transfer Characteristics**

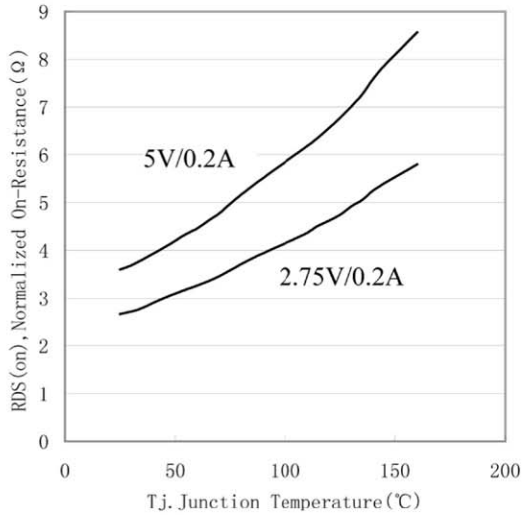


**Figure 3. Breakdown Voltage Variation with Temperature**

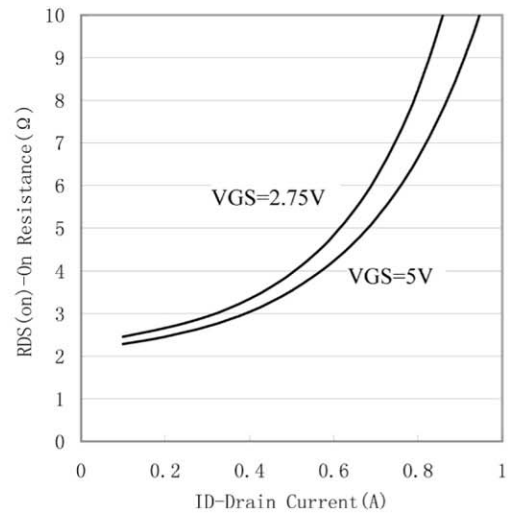


**Figure 4. Gate Threshold Variation with Temperature**

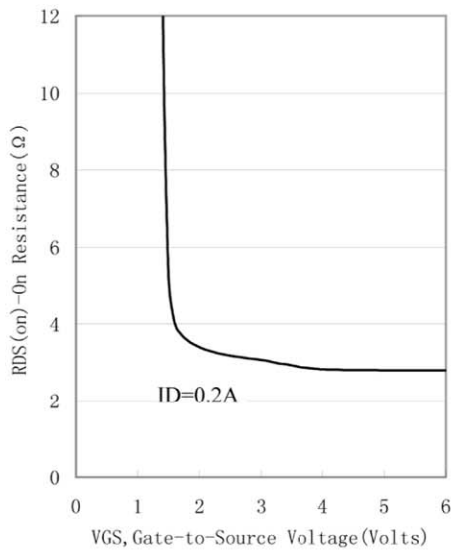
## Typical Characteristics



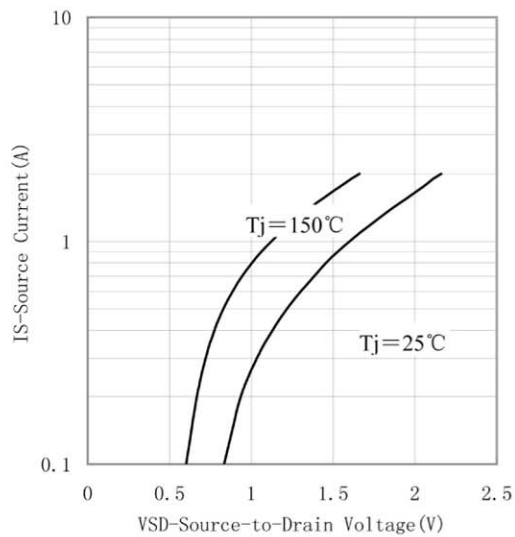
**Figure 5. On-Resistance Variation with Temperature**



**Figure 6. On-Resistance vs. Drain Current**



**Figure 7. On-Resistance vs. Gate-to-Source Voltage**



**Figure 8. Source-Drain Diode Forward Voltage**